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Daniel Lecomte

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EXAMINER

SAINT CYR, JEAN D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,963	Applicant(s) LECOMTE ET AL.	
	Examiner JEAN Duclos SAINT CYR	Art Unit 2425	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-49 and 51-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-49 and 51-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Miscellaneous

In response to the applicant's amendment filed on 04/13/2010, the finality of the last office action is withdrawn and an office action on new ground of rejection follows.

Response to Arguments

Applicant's arguments with respect to claims 47-49, 51-92 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues about the double patenting rejection in saying that the claims 1 and 2 of the copending application (11091217) were cancelled and the claims of that application are directed to a different type of content and they do not involve the use of wavelets. Also, applicant argues that the cited references did not disclose that the modified stream and the complementary data are transmitted together, wherein the reconstruction is adaptive and progressive as a function of information associated with a digital profile of the addressee equipment provided in the complementary information.

However, Ottesen et al show in fig.1 and disclose that Module 120 modifies data from a base-domain source to add one or more markers for later restoration of the original image, module 130 may send only the magnitude component--or a derivative such as magnitude squared--as data 131 representing the original image. Line 132 symbolically represents discarded complementary phase-component data, col.4, lines 65-67, col.5, lines 1-9; by associating data marker to the transformed stream for later restoration that means that the complementary data was transmitted together with the modified stream. Also, fig.1 shows that the modified stream and the complementary data are outputted from the transform module 130 at ports 131 and 132 respectively. By saying calculating the complementary data from the restore module means that the receiver identifies the data marker and padding and takes the inverse transform of the modified stream to convert it to base domain. Module 150 reinserts the known marker value(s) and padding at the correct locations in the image data during every iteration, so as to coerce convergence toward the correct image. That information proves that

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the signal was modified by adding data marker to it and it was transformed before reaching the channel of transmission 140 as showing in fig.1.

Finally, Malvar et al disclose includes a method for decompressing a compressed bitstream by using adaptive run-length decoding to obtain transform coefficients from the compressed bitstream, rearranging the coefficients into their original order, and using an inverse DCT transform and an inverse LBT to obtain the reconstructed image data from the decoded coefficients,0016; allows progressive image reconstruction, both in resolution and in fidelity, with a fully embedded bitstream,0042; an image that has been encoded at a certain fidelity may be decoded at a lower fidelity, thereby allowing, for example, a server to distribute different versions of the same encoded image to different clients having different capabilities,0101; that means the signal was reconstructed according to the capability of the addressee equipment like resolution and storage capacity and the resolution of the screen and storage capacity of the equipment of the user represent the digital profile of the addressee equipment. As a result, this action is made non-final.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 41 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 22 of copending Application No. 11091217. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 47 is obvious variants and encompassed by claim 22 of the application' 217'.

claim 22 of '217 recites, 'producing a modified stream from the original stream by replacing at least a part of coefficients of the sequences of the original stream by values different from original values, the original stream being in a nonainal compressed format other than encrypted, said modified stream being of the same nominal compressed format as the original stream, transmitting the modified stream to a recipient, transmitting a subset of the complementary information to the recipient, the subset being determined based on a digital profile of the recipient and is adaptive and progressive in function of the distal profile provided, and reconstructing at a recipient side of the video sequences from the modified stream and the complementary information by replacing the modified coefficients from the modified stream by values contained in the complementary information at locations indicated by the complementary information ...', which reads on the claim 47 of the present application, 'modifying the original stream by modifying the wavelet coefficients to produce a stream modified in the same nominal format as the original stream, and transmitting the modified stream and the complementary information to an addressee equipment for reconstruction; the original reconstructed stream from the modified

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stream and the complementary information, wherein the reconstruction is adaptive and progressive as a function of information associated with a digital profile of the addressee equipment provided in the complementary information'. The two inventions modify the original streams by replacing the coefficients of the sequences.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 47-49, 51-52, 54, 57-58, 62-64, 70-75, 78, 91-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al in view of Ottesen further in view of Malvar et al, US No. 20040234147.

Re claim 47, Shin et al disclose a process for secured distribution of at least one digital fixed picture in an original stream, wherein the picture includes sequences of data that respectively contain a part of information of the picture, the original stream being in a nominal compressed format based on wavelets and the original stream including wavelet coefficients, the process comprising (see fig.2, host image to be transmitted; see fig.2, element 202, wavelet transform portion):

modifying the original stream by modifying the wavelet coefficients to produce a

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stream modified in the same nominal format as the original stream (see fig.2, replaced MXM wavelet coefficient); and

But did not explicitly disclose generating complementary information including modified information from the original stream, the complementary information also including functions for reconstructing the original stream with the modified information; and transmitting the modified stream and the complementary information to an addressee equipment for reconstruction;

the original reconstructed stream from the modified stream and the complementary information, wherein the reconstruction is adaptive and progressive as a function of information associated with a digital profile of the addressee equipment provided in the complementary information.

However, Ottesen et al disclose generating complementary information including modified information from the original stream, the complementary information also including functions for reconstructing the original stream with the modified information; and transmitting the modified stream and the complementary information to an addressee equipment for reconstruction(see fig.1; Module 120 modifies data from a base-domain source to add one or more markers for later restoration of the original image, module 130 may send only the magnitude component--or a derivative such as magnitude squared--as data 131 representing the original image. Line 132 symbolically represents discarded complementary phase-component data, col.4, lines 65-67, col.5, lines 1-9; by associating data marker to the transformed stream for later restoration that means that the complementary data was transmitted together with the modified stream. Also, fig.1 shows that the modified stream and the complementary data are outputted from the transform module 130 at ports 131 and 132 respectively).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Ottesen into the invention of Shin for the purpose of associating related data with the modified stream during transmission.

And Malvar et al disclose the original reconstructed stream from the modified stream and the complementary information, wherein the reconstruction is adaptive and progressive as a function of information associated with a digital profile of the addressee equipment provided in the complementary information (includes a method for decompressing a compressed bitstream by using adaptive run-length decoding to obtain transform coefficients from the compressed bitstream, rearranging the coefficients into their original order, and using an inverse DCT transform and an inverse LBT to obtain the reconstructed image data from the decoded coefficients,0016; allows progressive image reconstruction, both in resolution and in fidelity, with a fully embedded bitstream,0042; an image that has been encoded at a certain fidelity may be decoded at a lower fidelity, thereby allowing, for example, a server to distribute different versions of the same encoded image to different clients having different capabilities,0101; that means the signal was reconstructed according to the capability of the addressee equipment like resolution and storage capacity).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Malvar into the invention of Shin as modified by Ottesen for the purpose of using data related to user profile in the reconstruction of the modified content.

Re claim 48, Shin et al did not explicitly disclose wherein the modifying comprises producing a modified main stream and the complementary information permitting reconstruction of the original stream by a decoder; the generating comprises determining a subset of the complementary information as a function of information derived from a digital profile of the addressee equipment; and the transmitting

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comprises transmitting to the addressee equipment a-the subset of the complementary information.

However, Ottesen et al disclose the generating comprises determining a subset of the complementary information as a function of information derived from a digital profile of the addressee equipment(see fig.1, module 120 and module 130).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Ottesen into the invention of Shin for the purpose of generating complementary information during transformation.

And Malvar et al disclose wherein the modifying comprises producing a modified main stream and the complementary information permitting reconstruction of the original stream by a decoder and the transmitting comprises transmitting to the addressee equipment a-the subset of the complementary information(decoding to obtain transform coefficients from the compressed bitstream, rearranging the coefficients into their original order, and using an inverse DCT transform and an inverse LBT to obtain the reconstructed image data from the decoded coefficients,0016; an image that has been encoded at a certain fidelity may be decoded at a lower fidelity, thereby allowing, for example, a server to distribute different versions of the same encoded image to different clients having different capabilities,0101; that means the signal was reconstructed according to the capability of the addressee equipment like resolution and storage capacity).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Malvar into the invention of Shin as modified by Ottesen for the purpose of using data related to user profile to reconstruct the original stream.

As claim 49, the claimed “wherein the modifying comprises producing a modified

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main stream and complementary information permitting reconstruction of the original stream by a decoder..., the transmitting comprises transmitting to the addressee equipment a-the subset of the complementary information..." is composed of the same structural elements as previously discussed with respect to the rejection of 48.

Re claim 51, Shin et al did not explicitly disclose wherein the original stream has a property of scalability in resolution.

However, Malvar et al disclose wherein the original stream has a property of scalability in resolution (This maintains the scalability (in fidelity and resolution,0062).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Malvar into the invention of Shin as modified by Ottesen for the purpose of transforming the original image in different resolution.

Re claim 52, Shin et al did not explicitly disclose wherein the original stream has a property of spatial scalability.

However, Malvar et al disclose wherein the original stream has a property of spatial scalability (spatial domain,0045).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Malvar into the invention of Shin as modified by Ottesen for the purpose of filtering the transformation of the original image.

Re claim 54, Shin et al did not explicitly disclose wherein the original stream has a property of spectral scalability.

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However, Malvar et al disclose wherein the original stream has a property of spectral scalability (a frequency domain representation,0061)

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Malvar into the invention of Shin as modified by Ottesen for the purpose of using frequency domain for analyzing the transformation of the original image.

Re claim 57, Shin et al did not explicitly disclose wherein the transmitting further comprises transmitting the modified main stream and the complementary information together in real time.

However, Ottesen et al disclose wherein the transmitting further comprises transmitting the modified main stream and the complementary information together in real time (see fig.1, modules 120 and 130).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Ottesen into the invention of Shin for the purpose of increasing security and limiting delay in reproduction.

Re claim 58, is met as previously discussed with respect to the rejection of claim 51.

Re claim 62, Shin et al did not explicitly disclose wherein generating complementary information includes generating complementary information that comprises at least one digital routine suitable for executing a function.

However, Ottesen et al disclose wherein generating complementary information includes generating complementary information that comprises at least one digital routine suitable for executing a function (a computer-readable storage or

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communication medium such as 101 or 102 may hold or transmit some or all of any computer instructions or data for executing the invention, 0027).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Ottesen into the invention of Shin for the purpose of associating routine with complementary information.

Re claim 63, Shin et al did not explicitly disclose wherein the transmitting further comprises transmitting the functions to addressee equipment addressees which functions are customized for the addressee equipment as a function of a session.

However, Malvar et al disclose wherein the transmitting further comprises transmitting the functions to addressee equipment addressees which functions are customized for the addressee equipment as a function of a session (an image that has been encoded at a certain fidelity may be decoded at a lower fidelity, thereby allowing, for example, a server to distribute different versions of the same encoded image to different clients having different capabilities, 0101).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Malvar into the invention of Shin for the purpose of allowing users to receive specific data according to the capacity of their device.

Re claim 64, Shin et al disclose wherein the generating further comprises encrypting the complementary information for addressee equipment as a function of a session (coefficient components of the signature image 4 are encoded by a separate encryption encoder 6 that controls the encryption operation, col.1, lines 47-49).

Re claim 70, Shin et al did not explicitly disclose wherein the determining comprises updating information contained in the subset as a function of behavior of the addressee

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equipment during connection to a server or as a function of habits or as a function of data communicated by a third party.

However, Malvar et al disclose wherein the determining comprises updating information contained in the subset as a function of behavior of the addressee equipment during connection to a server or as a function of habits or as a function of data communicated by a third party (The vector sflg controls the allocation of bits to x1, and sflg is first initialized to all zeros, and then updated after each bit plane is encoded . Thus, the decoder can easily track the changes,0081).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Ottesen in updating any data, as taught by Malvar, for the purpose of keep track of all modifications of data.

Re claim 71, is met as previously discussed with respect to claim 70.

Re claim 72, Shin et al disclose further comprising analog/digital converting data in a structured format, which is applied to an analog signal (see fig.2, compression of image).

Re claim 73, Shin et al disclose further comprising transcoding a digital stream from any format to a format with scalability properties (see fig.2, wavelet coefficients).

Re claim 74, Shin et al disclose wherein a plurality of digital fixed pictures constitute a succession of pictures(see fig.2, element 204; a dot-type image at regular interval, col.5, lines 30-32; that means a plurality of images).

Re claim 75, Shin et al disclose wherein the modifying comprises applying different modifications of the data sequences for at least two pictures of a succession of pictures(50% of upper significant wavelet coefficients are selected among M.times.M

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wavelet coefficients, and N.times.N wavelet coefficients are selected among 50% of upper significant wavelet coefficients, in accordance with the predetermined rule, for example, at regular intervals, col.5, lines 48-53; that means the coefficients will 1, .5, .25 and so on).

Re claim 78, Shin et al disclose wherein the process is performed without loss of picture quality (see fig.2, restore host image).

Re claim 91, Shin et al did not explicitly disclose a plurality of devices provided with respective descrambling circuits, means for recording respective a digital profiles of corresponding instances of the address equipment, and means for analyzing at least one digital profile of at least one instance of addressee equipment to which the modified stream is transmitted, which analyzing means controls the nature of complementary information transmitted to-the addressee equipment.

However, Malvar et al disclose a plurality of devices provided with respective descrambling circuits, means for recording respective a digital profiles of corresponding instances of the address equipment, and means for analyzing at least one digital profile of at least one instance of addressee equipment to which the modified stream is transmitted, which analyzing means controls the nature of complementary information transmitted to-the addressee equipment (see fig.1; a server to distribute different versions of the same encoded image to different clients having different capabilities,0101; that means a plurality of digital profiles were recorded).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Ottesen in introducing specific information regarding a user, as taught by Malvar, for the purpose of allowing only authorized users to get access to contents.

Re claim 92, Shin et al did not disclose further comprising determining wherein a

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respective level of the complementary information for at least one instance of addressee equipment based upon a state of a profile associated with the addressee equipment.

However, Malvar et al disclose further comprising determining wherein a respective level of the complementary information for at least one instance of addressee equipment based upon a state of a profile associated with the addressee equipment (To recover the original order for decoding purposes, the output of the reordering algorithm is read in the same manner in which it was written. All that is required is knowledge of the size of the original matrix, and the number of levels that were written, 0097).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Ottesen in introducing specific information regarding a user, as taught by Malvar, for the purpose of modifying the quality of the content according to information associated with the equipment of the user.

Claims 53, 59-61, 76-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al in view of Ottesen further in view of Malvar et al and further in view of Zhang, US No. 7,321,625 .

Re claim 53, Shin et al did not explicitly disclose wherein the original stream has a property of qualitative scalability.

However, Zhang et al disclose wherein the original stream has a property of qualitative scalability (subband MCTF coders can easily support quality scalability by using bitplane coding, col. 16, lines 17-18).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Zhang into the invention of Shin as

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modified Malvar and Ottesen for the purpose of limiting degradation in the transformation of the original image.

Re claim 59, Shin et al did not explicitly disclose wherein determining a subset of the complementary information includes determining the subset based on properties of granular scalability of the complementary information.

However, Zhang et al disclose wherein determining a subset of the complementary information includes determining the subset based on properties of granular scalability of the complementary information(fine granularity scalability can also be achieved by incorporating bit-plane coding techniques,col.16, lines 52-53).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Zhang into the invention of Shin as modified Malvar and Ottesen for the purpose of achieving a constant quality in frame level and in GOF level.

Re claim 60, Shin et al did not explicitly disclose further comprising determining a quantity of information contained in the subset based on corresponds to a level of scalability determined as a function of a profile of the addressee equipment.

However, Zhang et al disclose further comprising determining a-quantity of information contained in the subset based on corresponds to a level of scalability determined as a function of a profile of the addressee equipment (Multiresolution video representation information may be provided by control information received from the video source, or by control information received over the channel 1406 from the video decoder, col.3, lines 42-46).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Zhang into the invention of Shin as

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modified by Malvar and Ottesen for the purpose of allowing user to receive content according to the resolution of their device.

Re claim 61, is met as previously discussed with respect to claim 60.

Re claim 76, Shin et al did not explicitly disclose wherein the applying different modifications of data sequences of a picture of a succession of pictures include modifying the data sequences of preceding pictures in temporal order of the succession based on properties of spatial and qualitative scalability of transformations in wavelets.

However, Zhang et al disclose wherein the applying different modifications of data sequences of a picture of a succession of pictures include modifying the data sequences of preceding pictures in temporal order of the succession based on properties of spatial and qualitative scalability of transformations in wavelets(temporal direction,col.2, line 19; video representation of support of scalable motion vectors for different combinations of spatial scalability and temporal scalability,col.2, lines 27-29; easily support quality scalability by using bitplane coding, col.16, lines 17-18).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing temporal order and properties of spatial and qualitative scalability, as taught by Zhang, for the purpose limiting deterioration in transformation of data.

Re claim 77, Shin et al did not explicitly disclose wherein granular scalability of the complementary information is based on qualitative, spatial and in-resolution scalabilities of streams stemming from a transformation in wavelets of the pictures.

However, Zhang et al disclose wherein granular scalability of the complementary information is based on qualitative, spatial(col.2, lines 27-29; easily support quality

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scalability by using bitplane coding, col.16, lines 17-18) and in-resolution scalabilities of streams stemming from a transformation in wavelets of the pictures(fine granularity scalability can also be achieved by incorporating bit-plane coding techniques,col.6, lines 50-53).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing temporal order and properties of spatial and qualitative scalability, as taught by Zhang, for the purpose limiting deterioration in transformation of data.

Claims 79-85, 87-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al in view of Ottesen et al further in view of Malvar and further in view of Stone, US No.20020118859 .

Re claim 79, shin et al did not explicitly disclose further comprising inserting, during reconstruction of the original stream, an indelible and imperceptible trace-into the reconstructed original stream, which trace carries a non-ambiguous identifier.

However, Stone et al disclose further comprising inserting; during reconstruction of the original stream, an indelible and imperceptible trace-into the reconstructed original stream, which trace carries a non-ambiguous identifier (ensure that the mark is imperceptible where an imperceptible mark is desired. Those properties may be incompatible. Also, when material has been watermarked, it is desirable to be able to remove the mark. However, embedding a watermark in the material in such a way as to make difficult unauthorized removal may also have the consequence that the watermark is difficult to remove by an authorized person, 0010).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of

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Ottesen in introducing imperceptible trace during reconstruction, as taught by Stone, for the purpose of increasing security against unauthorized users.

Re claim 80, Shin et al did not explicitly disclose further comprising inserting, after reconstruction of the original stream, an indelible and imperceptible trace into the reconstructed original stream which trace carries a non-ambiguous identifier.

However, Stone et al disclose further comprising inserting, after reconstruction of the original stream, an indelible and imperceptible trace into the reconstructed original stream which trace carries a non-ambiguous identifier(Robust watermarks are useful to trace the provenance of material which is processed in some way either in an attempt to remove the mark,0008).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar in view of Ottesen in introducing imperceptible trace after reconstruction, as taught by Stone, for the purpose of identify the owner of the material.

Re claim 81, Shin et al disclose further comprising detecting wherein the indelible and imperceptible trace by an-software that analyzes reconstructed original stream.

However, Stone et al disclose further comprising detecting wherein the indelible and imperceptible trace by an-software that analyzes reconstructed original stream(detects and removes the watermark to produce a substantially restored image, 0163).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing software for analyzing content, as taught by Stone, for the purpose of limiting degradation of image during reconstruction.

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Re claim 82, Shin et al disclose further comprising authenticating a user with wherein the non-ambiguous identifier.

However, Stone et al disclose further comprising authenticating a user with wherein the non-ambiguous identifier (Robust watermarks are useful to trace the provenance of material which is processed in some way either in an attempt to remove the mark or to effect legitimate processing, 0008).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing non-ambiguous identifier, as taught by Stone, for the purpose of limiting access to unauthorized users.

Re claim 83, Shin et al did explicitly disclose further comprising authenticating addressee equipment on which a reconstruction algorithm for reconstructing the original stream was executed with wherein the non-ambiguous .

However, Stone et al disclose further comprising authenticating addressee equipment on which a reconstruction algorithm for reconstructing the original stream was executed with wherein the non-ambiguous (user code, 0232).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing non-ambiguous identifier, as taught by Stone for the purpose of authenticating equipment with respect to user code.

Re claim 84, Shin et al did not explicitly disclose further comprising identifying a session opened by a user during the course of which reconstitution of the original stream is executed with the non-ambiguous identifier.

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However, Stone et al disclose further comprising identifying a session opened by a user during the course of which reconstitution of the original stream is executed with the non-ambiguous identifier (An Instance number is primarily used to identify associated metadata related to any particular instance of a clip, 0212).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing non-ambiguous identifier, as taught by Stone, for the purpose of identifying a particular clip.

Re claim 85, Shin et al did not explicitly disclose further comprising realizing a scrambling session and descrambling session are realized under control of a secured server disguised as a selected third party.

However, Malvar et al disclose further comprising realizing a scrambling session and descrambling session are realized under control of a secured server disguised as a selected third party (a server to distribute different versions of the same encoded image to different clients having different capabilities, 0101).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Stone further in view of Ottesen in introducing a secured server, as taught by Malvar, for the purpose of controlling distribution of data.

Re claim 87, is met as previously discussed with respect to claims 80 and 85.

Re claim 88, is as previously discussed with respect to claim 79.

Claims 86, 89, 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al in view of Ottesen et al further in view of Malvar and further in view of Stone and Sasaki, US No. 6735699.

Re claim 86, shin et al did not explicitly disclose further comprising identifying the session by a secured server with a register that is configured to store session: an identifier associated with session, an identifier of a user or identifier of addressee equipment, and an identifier associated with subject matter of the session and an identifier representing a date-time group.

However, Sasaki et al disclose further comprising identifying the session by a secured server with a register that is configured to store session: an identifier associated with session, an identifier of a user or identifier of addressee equipment, and an identifier associated with subject matter of the session and an identifier representing a date-time group(col.2, lines 48-51).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Stone further in view of Ottesen and Malvar in introducing a secured server, as taught by Sasaki, for the purpose of increasing security against unauthorized users.

Re claim 89, Shin et al did not explicitly disclose wherein a stream reconstituted by descrambling exists in a usable form only if a digital signature extracted during an authenticity control is identical to a signature stored on a secured server.

However, Sasaki et al disclose wherein a stream reconstituted by descrambling exists in a usable form only if a digital signature extracted during an authenticity control is identical to a signature stored on a secured server (see fig.4).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Stone further in view of Ottesen and Malvar in introducing a secured server, as taught by Sasaki, for the purpose of increasing security against unauthorized users.

Re claim 90, Shin et al did not explicitly disclose wherein the process is applied to an audiovisual digital stream that is coded according to a proprietary norm or standard.

However, Sasaki et al disclose wherein the process is applied to an audiovisual digital stream that is coded according to a proprietary norm or standard (see fig.4, element 112).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Stone further in view of Ottesen and Malvar in introducing a secured server, as taught by Sasaki, for the purpose of protecting right of owners.

Claims 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al in view of Ottesen et al further in view of Malvar and further in view of Kim, US No.20020133830 .

Re claim 55, Shin et al did not explicitly disclose wherein the transmitting further comprises transmitting the modified main stream onto the addressee equipment prior to transmitting the complementary information to the addressee equipment.

However, Kim et al disclose wherein the transmitting further comprises transmitting the modified main stream onto the addressee equipment prior to transmitting the complementary information to the addressee equipment (the system, either in whole or in parts, preloads a selection of videos on a subscriber's set top box based on a usage profile, 0030).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Kim into the invention of Shin as

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modified Malvar and Ottesen for the purpose of limiting congestion of bandwidth during transmission and increasing security in reproducing contents.

Re claim 56, Shin et al did not explicitly disclose wherein the transmitting further comprises transmitting part of the modified main stream onto the addressee equipment prior to transmitting the complementary information to the addressee equipment.

However, Kim et al disclose wherein the transmitting further comprises transmitting part of the modified main stream onto the addressee equipment prior to transmitting the complementary information to the addressee equipment (It is also possible to preload, push to the STB 140 several minutes of the first chapter of each video, 0131).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Kim into the invention of Shin as modified Malvar and Ottesen for the purpose of limiting congestion of bandwidth during transmission and shortage of storage.

Claims 65-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al in view of Ottesen et al further in view of Malvar and further in view of Kamiya, US No.7421082 .

Re claim 65, Shin et al did not explicitly disclose wherein the generating further comprises subdividing the complementary information into at least two subparts.

However, Kamiya et al disclose wherein the generating further comprises subdividing the complementary information into at least two subparts(see fig.1; plurality of pieces of key information are generated on the basis of an encryption key specific to each digital data item to be delivered, abstract) .

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It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing plurality of pieces of key information, as taught by Kamiya, for the purpose of making the system safer against unauthorized users.

Re claim 66, shin et al did not explicitly disclose wherein the transmitting further comprises transmitting the subparts by different media.

However, Kamiya et al disclose wherein the transmitting further comprises transmitting the subparts by different media (see fig.1, elements 4 and 5).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in introducing transmitting plurality of pieces of key information in different media, as taught by Kamiya, for the purpose of making the system safer against unauthorized users.

Re claim 67, Shin et al did not explicitly disclose wherein the transmitting further comprises transmitting the subparts by the same medium.

However, Kamiya et al disclose wherein the transmitting further comprises transmitting the subparts by the same medium (see fig.8; key information is delivered over a network, that network can be physically the same as that for content transmission. In that case, however, content and key information are not delivered simultaneously; preferably they are transmitted at different times, col.4, lines 18-22).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in transmitting subparts by the same medium, as taught by Kamiya, for the purpose of limiting delay in reproducing the content.

Re claim 68, Shin et al did not explicitly disclose wherein the transmitting further comprises transmitting all or part of the complementary information on a physical vector.

However, Kamiya et al disclose wherein the transmitting further comprises transmitting all or part of the complementary information on a physical vector(Multipoint delivery may be implemented either electronically over networks, such as the internet or broadcasting or communication channels, or physically through the use of storage media,col.2, lines 64-67).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in transmitting all or part of the complementary information on a physical vector, as taught by Kamiya, for the purpose of allowing the system to tune to a specific channel to receive key.

Re claim 69, Shin et al did not explicitly disclose wherein the transmitting further comprises transmitting the complementary information on-line.

However, Kamiya et al disclose wherein the transmitting further comprises transmitting the complementary information on-line (see fig.8, internet).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Shin in view of Malvar further in view of Ottesen in transmitting all or part of the complementary information online, as taught by Kamiya, for the purpose of allowing the system to use IP address to send data to users.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Duclos Saintcyr whose phone number is 571-270-3224. The examiner can normally reach on M-F 7:30-5:00 PM EST.If attempts to reach

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the examiner by telephone are not successful, his supervisor, Brian Pendleton, can be reached on 571-272-7527. The fax number for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, dial 800-786-9199(IN USA OR CANADA) or 571-272-1000.

/Jean Duclos Saintcy /

/Brian T. Pendleton/

Supervisory Patent Examiner, Art Unit 2425